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Eindhoven (NL). TIEKE, Benno [DE/NL]; Prof. Holst-
laan 6, NL-5656 AA Eindhoven (NL).

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(74) Agent: DEGUELLE, Wilhelmus, H., G.; INTERNA-
TIONAAL OCTROOIBUREAU B.V., Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

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(71) Applicant (*for all designated States except US*): KONIN-
KLJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

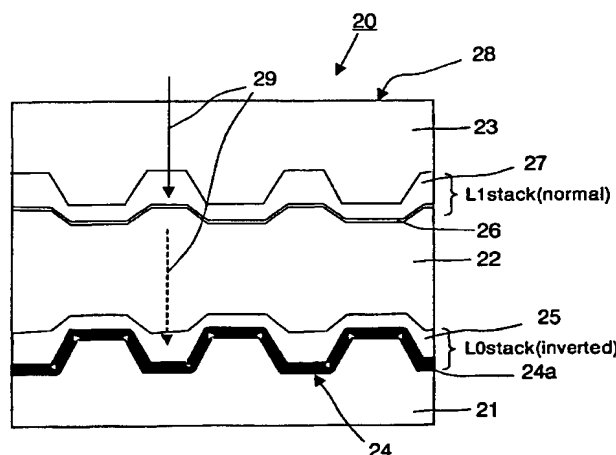
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(72) Inventors; and

(75) Inventors/Applicants (*for US only*): MARTENS, Hu-
bert, C., F. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA

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(54) Title: OPTICAL DATA STORAGE MEDIUM AND USE OF SUCH MEDIUM



(57) Abstract: An optical data storage medium (20) for recording by means of a focused radiation beam (29) is described. The radiation beam having a wavelength λ enters through an entrance face (28) of the medium during recording. The medium has a substrate (21) with a surface (24) including a guide groove with a depth g . An inverted stack of layers is present on the substrate (21) including a reflective layer (24a) with a complex refractive index $\tilde{n}_{M\lambda} = n_{M\lambda} - i \cdot k_{M\lambda}$, in substantial conformity with the surface (24) of the substrate, a transparent layer (22) through which the radiation beam (29) is incident with a complex refractive index $\tilde{n}_{T\lambda} = n_{T\lambda} - i \cdot k_{T\lambda}$ and a recording layer (25) of a material having a complex refractive index $\tilde{n}_{R\lambda} = n_{R\lambda} - i \cdot k_{R\lambda}$ and having a thickness d_{RG} in the groove portion and a thickness d_{RL} in the portion between grooves. The recording layer is interposed between the reflective layer (24a) and the transparent layer (22). When $0.25/(3.0 + k_{M\lambda}^2) + 0.17 < g \cdot n_{T\lambda}/\lambda < 0.22/(3.0 + k_{M\lambda}^2) + 0.45$ and $0.2 < (d_{RG} - d_{RL})/g < 0.5$ and $0 < d_{RG} < \lambda/n_{R\lambda}$ and $k_{R\lambda} < 0.5$ and $2 < n_{R\lambda} < 2.6$ the sign of the push pull tracking signal is reversed. In such way the inverted recording stack is tracked properly without modifications to the optical drive and backwards compatibility is achieved.